1163-14-1458 **Renee Bell*** (rhbell@math.upenn.edu), David Rittenhouse Laboratory, 209 S. 33rd Street, Office 4N61, Philadelphia, PA 19104, and **Jeremy Booher**, **William Chen** and **Yuan Liu**.

Tamely ramified covers of the projective line with alternating and symmetric monodromy.

Let k be an algebraically closed field of characteristic p and let X the projective line over k with three points removed. We investigate which finite groups G can arise as the monodromy group of étale covers of X that are tamely ramified over the three removed points. This provides new information about the tame fundamental group of the projective line. In particular, we show that for each prime $p \geq 5$, there are families of tamely ramified covers with monodromy the symmetric group S_n or alternating group A_n for infinitely many n. These covers come from the moduli spaces of elliptic curves with $PSL_2(\mathbb{F}_\ell)$-structure, and the analysis uses work of Bourgain, Gamburd, and Sarnak, and adapts work of Meiri and Puder, about Markoff triples modulo ℓ. (Received September 15, 2020)